

1. An overhead airbag system comprising:

an inflatable cushion for deployment from a vehicle roof into a space between a vehicle occupant and a surface of a vehicle; and

a cushion guide for mounting on a single surface of a vehicle, the cushion guide comprising a tether coupled to the inflatable cushion by a cushion attachment and to a vehicle by a vehicle attachment, wherein the cushion guide aids deployment of the inflatable cushion.

2. The overhead airbag system of claim 1, wherein the tether of the cushion guide is coupled to the inflatable cushion by a first cushion attachment and by a second cushion attachment, and wherein the tether of the cushion guide is coupled to the vehicle by a vehicle attachment positioned between the first and second cushion attachments.

3. The overhead airbag system of claim 2, wherein the vehicle attachment comprises a slidable attachment.

4. The overhead airbag system of claim 3, wherein the slidable attachment is an eyelet loop.

5. The overhead airbag system of claim 3, wherein the slidable attachment is a pulley.

6. The overhead airbag system of claim 3, wherein the slidable attachment is a pivot pin.

7. The overhead airbag system of claim 3, wherein the slidable attachment is a spool.

8. The overhead airbag system of claim 1, wherein the cushion guide is a retractable cushion guide.

5 9. The overhead airbag system of claim 8, wherein the retractable cushion guide comprises a tether and a retraction device coupled to the tether for maintaining a tension on the tether.

10. The overhead airbag system of claim 9, wherein the retraction device is mounted to the vehicle.

10 11. The overhead airbag system of claim 8, wherein the retractable cushion guide comprises a tether and a pretensioning device coupled to the tether for maintaining a tension on the tether.

12. The overhead airbag system of claim 11, wherein the pretensioning device is mounted to the vehicle.

15 13. The overhead airbag system of claim 1, wherein the cushion guide comprises a loop-shaped continuous tether coupled to the inflatable cushion by a cushion attachment and coupled to the vehicle by a first vehicle attachment and a second vehicle attachment.

14. The overhead airbag system of claim 13, wherein the first vehicle attachment and the second vehicle attachment are slidable attachments.

15. The overhead airbag system of claim 14, wherein the slidable attachments are selected from the group consisting of eyelet loops, pulleys, and pivot pins.

5 16. The overhead airbag system of claim 1, wherein the cushion guide comprises a guide rail fixed to the vehicle and a tether coupled to the inflatable cushion and slidably coupled to the guide rail, the tether being slidable along a length of the guide rail.

17. The overhead airbag system of claim 1, wherein the cushion guide is configured to be mounted on a single lateral surface of a vehicle.

10 18. The overhead airbag system of claim 17, wherein the single lateral surface of a vehicle is a vehicle pillar.

19. The overhead airbag system of claim 18, wherein the single lateral surface of a vehicle is a vehicle A-pillar.

15

20. An overhead airbag system for protecting a vehicle occupant, the overhead
airbag system comprising:

an inflatable overhead airbag cushion for mounting in a roof of a vehicle and for
deployment from the roof into a space between a vehicle occupant and a potential contact
5 surface of a vehicle;

an airbag inflator coupled to the airbag cushion; and

a cushion guide for mounting to a single surface in a vehicle, the cushion guide
comprising a tether and a vehicle reference point, the guide tether being coupled to the
inflatable overhead airbag cushion by a cushion attachment and coupled to the vehicle
10 reference point by a vehicle attachment.

21. The overhead airbag system of claim 20, wherein the tether of the cushion
guide is coupled to the inflatable overhead airbag cushion by a first cushion attachment
and by a second cushion attachment, the tether being attached to the vehicle reference
point between the first and second cushion attachments.

15 22. The overhead airbag system of claim 21, wherein the vehicle attachment
comprises a slidable attachment.

23. The overhead airbag system of claim 22, wherein the slidable attachment is an
eyelet loop.

24. The overhead airbag system of claim 22, wherein the slidable attachment is a
20 pulley.

25. The overhead airbag system of claim 22, wherein the slidable attachment is a pivot pin.

26. The overhead airbag system of claim 22, wherein the slidable attachment is a spool.

5 27. The overhead airbag system of claim 20, wherein the cushion guide is a retractable cushion guide.

28. The overhead airbag system of claim 27, wherein the cushion guide comprises a retractable tether and a retraction device coupled to the tether for maintaining a tension on the tether.

10 29. The overhead airbag system of claim 28, wherein the retraction device is mounted to the vehicle.

30. The overhead airbag system of claim 27, wherein the retractable cushion guide comprises a tether and a pretensioning device coupled to the tether for maintaining a tension on the tether.

15 31. The overhead airbag system of claim 30, wherein the pretensioning device is mounted to the vehicle.

32. The overhead airbag system of claim 20, wherein the cushion guide comprises a continuous loop-shaped tether coupled to the inflatable overhead airbag cushion, the tether also being coupled to the vehicle by a first vehicle attachment and a second vehicle attachment.

5 33. The overhead airbag system of claim 32, wherein the first vehicle attachment and the second vehicle attachment comprise slidable attachments.

34. The overhead airbag system of claim 33, wherein the slidable attachments are eyelet loops.

10 35. The overhead airbag system of claim 33, wherein the slidable attachments are pulleys.

36. The overhead airbag system of claim 33, wherein the slidable attachments are pivot pins.

37. The overhead airbag system of claim 33, wherein the slidable attachments are spools.

15 38. The overhead airbag system of claim 20, wherein the cushion guide comprises a tether and a guide rail, the tether being coupled to the inflatable overhead airbag cushion and slidably attached to the guide rail, the guide rail being fixedly attached to the vehicle.

39. The overhead airbag system of claim 38, wherein the guide rail is fixedly attached to a lateral surface of the vehicle.

40. The overhead airbag system of claim 39, wherein the lateral surface of the vehicle is a vehicle pillar.

5 41. The overhead airbag system of claim 40, wherein the lateral pillar is a vehicle A-pillar.

42. An overhead airbag system for protecting a vehicle occupant, the overhead airbag system comprising:

10 an inflatable overhead airbag cushion for deployment from a vehicle roof into a space between a vehicle occupant and a vehicle surface;

an airbag inflator coupled to the inflatable overhead airbag cushion; and

a cushion deployment guide for mounting on a lateral surface of a vehicle, the cushion deployment guide comprising a tether and a vehicle reference point, the tether
15 being fixedly attached to a first cushion attachment point and a second cushion attachment point and being slidably attached to the vehicle reference point between the first and second cushion attachment points, wherein the cushion deployment guide aids proper deployment of the inflatable overhead airbag cushion.

20 43. The overhead airbag system of claim 42, wherein the vehicle reference point comprises a slidable attachment.

44. The overhead airbag system of claim 43, wherein the slidable attachment is an eyelet loop.

45. The overhead airbag system of claim 43, wherein the slidable attachment is a pulley.

5 46. The overhead airbag system of claim 43, wherein the slidable attachment is a pivot pin.

47. The overhead airbag system of claim 43, wherein the slidable attachment is a spool.

10 48. The overhead airbag system of claim 42, wherein the vehicle reference point is positioned on a lateral surface of the vehicle.

49. The overhead airbag system of claim 48, wherein the vehicle reference point is positioned on a vehicular pillar.

50. The overhead airbag system of claim 49, wherein the vehicle reference point is positioned on a vehicular A-pillar.

51. An overhead airbag system for protecting a vehicle occupant, the overhead airbag system comprising:

an inflatable overhead airbag cushion for deployment from a vehicle roof into a space between a vehicle occupant and a vehicle surface;

5 an airbag inflator coupled to the inflatable overhead airbag cushion; and

a cushion deployment guide for mounting to a lateral surface of a vehicle, the cushion deployment guide comprising a tether and a vehicle reference point, the tether being fixedly attached to a cushion attachment point coupled to a tether retractor positioned at the vehicle reference point, wherein the tether retractor maintains a tension
10 on the tether during deployment of the inflatable overhead airbag cushion, thus aiding proper deployment of the inflatable overhead airbag cushion.

52. The overhead airbag system of claim 51, wherein the vehicle reference point is positioned on a lateral surface of the vehicle.

53. The overhead airbag system of claim 52, wherein the vehicle reference point
15 is positioned on a vehicular pillar.

54. The overhead airbag system of claim 53, wherein the vehicle reference point is positioned on a vehicular A-pillar.

20

55. An overhead airbag system for protecting a vehicle occupant, the overhead airbag system comprising:

an inflatable overhead airbag cushion for deployment from a vehicle roof into a space between a vehicle occupant and a vehicle surface;

5 an airbag inflator coupled to the inflatable overhead airbag cushion; and

a cushion deployment guide for mounting to a lateral surface of a vehicle, the cushion deployment guide comprising a tether and a vehicle reference point, the tether being fixedly attached to a cushion attachment point coupled to a tether pretensioning device positioned at the vehicle reference point, wherein the tether pretensioning may provide a tension on the tether during deployment of the inflatable overhead airbag cushion, thus aiding proper deployment of the inflatable overhead airbag cushion.

56. The overhead airbag system of claim 55, wherein the vehicle reference point is positioned on a lateral surface of the vehicle.

57. The overhead airbag system of claim 56, wherein the vehicle reference point is positioned on a vehicular pillar.

58. The overhead airbag system of claim 57, wherein the vehicle reference point is positioned on a vehicular A-pillar.

59. An overhead airbag system for protecting a vehicle occupant, the overhead airbag system comprising:

an inflatable overhead airbag cushion for deployment from a vehicle roof into a space between a vehicle occupant and a vehicle surface;

5 an airbag inflator coupled to the inflatable overhead airbag cushion; and

a cushion deployment guide for mounting to a lateral surface of a vehicle, the cushion deployment guide comprising a continuous loop-shaped tether, a first vehicle reference point, and a second vehicle reference point, the tether being fixedly coupled to the inflatable overhead airbag cushion at a cushion attachment point and slidably coupled to the first and second vehicle reference points such that during deployment, the tether slides through the first and second vehicle attachment points as the inflatable overhead airbag cushion inflates, thus aiding proper deployment of the cushion.

60. The overhead airbag system of claim 59, wherein the first and second vehicle reference points comprise slidable attachments.

15 61. The overhead airbag system of claim 60, wherein the slidable attachments are eyelet loops.

62. The overhead airbag system of claim 60, wherein the slidable attachments are pulleys.

20 63. The overhead airbag system of claim 60, wherein the slidable attachments are pivot pins.

64. The overhead airbag system of claim 60, wherein the slidable attachments are spools.

65. The overhead airbag system of claim 59, wherein the first and second vehicle reference points are positioned on a lateral surface of the vehicle.

5 66. The overhead airbag system of claim 65, wherein the first and second vehicle reference points are positioned on a vehicular pillar.

67. The overhead airbag system of claim 66, wherein the first and second vehicle reference points are positioned on a vehicular A-pillar.

10 68. An overhead airbag system for protecting a vehicle occupant, the overhead airbag system comprising:

an inflatable overhead airbag cushion for deployment from a vehicle roof into a space between a vehicle occupant and a vehicle surface;

an airbag inflator coupled to the inflatable overhead airbag cushion; and

15 a cushion deployment guide for mounting to a lateral surface of a vehicle, the cushion deployment guide comprising a tether and a vehicle reference point, the tether being fixedly coupled to the inflatable overhead airbag cushion at a cushion attachment point and slidably coupled to the vehicle reference point, and the vehicle reference point comprising a guide rail, the cushion deployment guide aiding proper deployment of the
20 cushion.

69. The overhead airbag system of claim 68, wherein the vehicle reference point is positioned on a lateral surface of the vehicle.

70. The overhead airbag system of claim 69, wherein the vehicle reference point is positioned on a vehicular pillar.

5 71. The overhead airbag system of claim 70, wherein the vehicle reference point is positioned on a vehicular A-pillar.